

SIXTH EDITION

# ECOLOGY

CONCEPTS AND APPLICATIONS

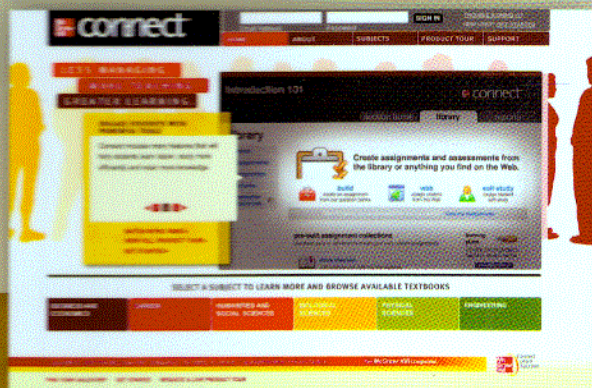


McGraw-Hill ConnectPlus® interactive learning platform provides auto-graded assessments, a customizable, assignable eBook, and powerful reporting—all in an easy-to-use interface.

By choosing ConnectPlus, instructors are providing their students with a powerful tool for improving academic performance and truly mastering course material. ConnectPlus allows students to practice important skills at their own pace and on their own schedule. Students' assessment results and instructor's feedback are all saved online—so students can continually review their progress and plot their course to success.

**Go Green** with **ConnectPlus** and connect your students with the tools and resources they'll need to achieve success.

Learn more at: [www.mcgrawhillconnect.com](http://www.mcgrawhillconnect.com)



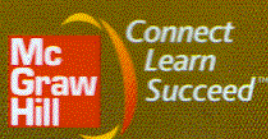
## ABOUT THE COVER

Average temperatures and precipitation change along mountain slopes. In response to variation in physical conditions, the kinds of plants, animals, and microbes also change along altitudinal gradients, with each species generally living within a restricted range of conditions. This altitudinal variation in microclimate and biota is reflected in the sweep of land in the southern Rocky Mountains pictured on the cover, where lower altitudes radiate the vibrant colors of aspen trees in early autumn, while the high snow-strewn peaks beyond jut against the deep blue northern sky of approaching winter. Although the higher peaks may appear devoid of vegetation from a distance, close inspection would show that these higher zones support a diverse array of low-growing herbaceous plants. Strong physical gradients, such as this one, support high levels of biodiversity, as associations of organisms change in response to differing physical conditions.

At this season, the aspen forests reveal another facet of biodiversity in this landscape. Genetic diversity within the aspen population is signaled by differences in the timing of leaf color change. The cover shows one of the results of these genetic variations: a quilt-like, patchwork of aspen foliage, changing color, according to differing schedules, as the trees transport nutrients from leaves to their roots in response to autumn's shorter days and decreasing temperatures.

Studies of the relationships between organisms and the environment make up the science we call ecology. This book was written to introduce this complex and fascinating discipline and to provide a conceptual foundation that will prepare the reader to look out onto a landscape, such as the one pictured on the cover, and see the broad outlines of the intricate connections weaving all living beings and their environments on this planet into a vast web of ecological interactions.

The McGraw-Hill Companies



ISBN 978-0-07-353249-3  
MHID 0-07-353249-5



EAN

9 780073 532493

[www.mhhe.com](http://www.mhhe.com)